

U6-A Kit

*Solar Energy + Gel Battery
Monitoring Solution*



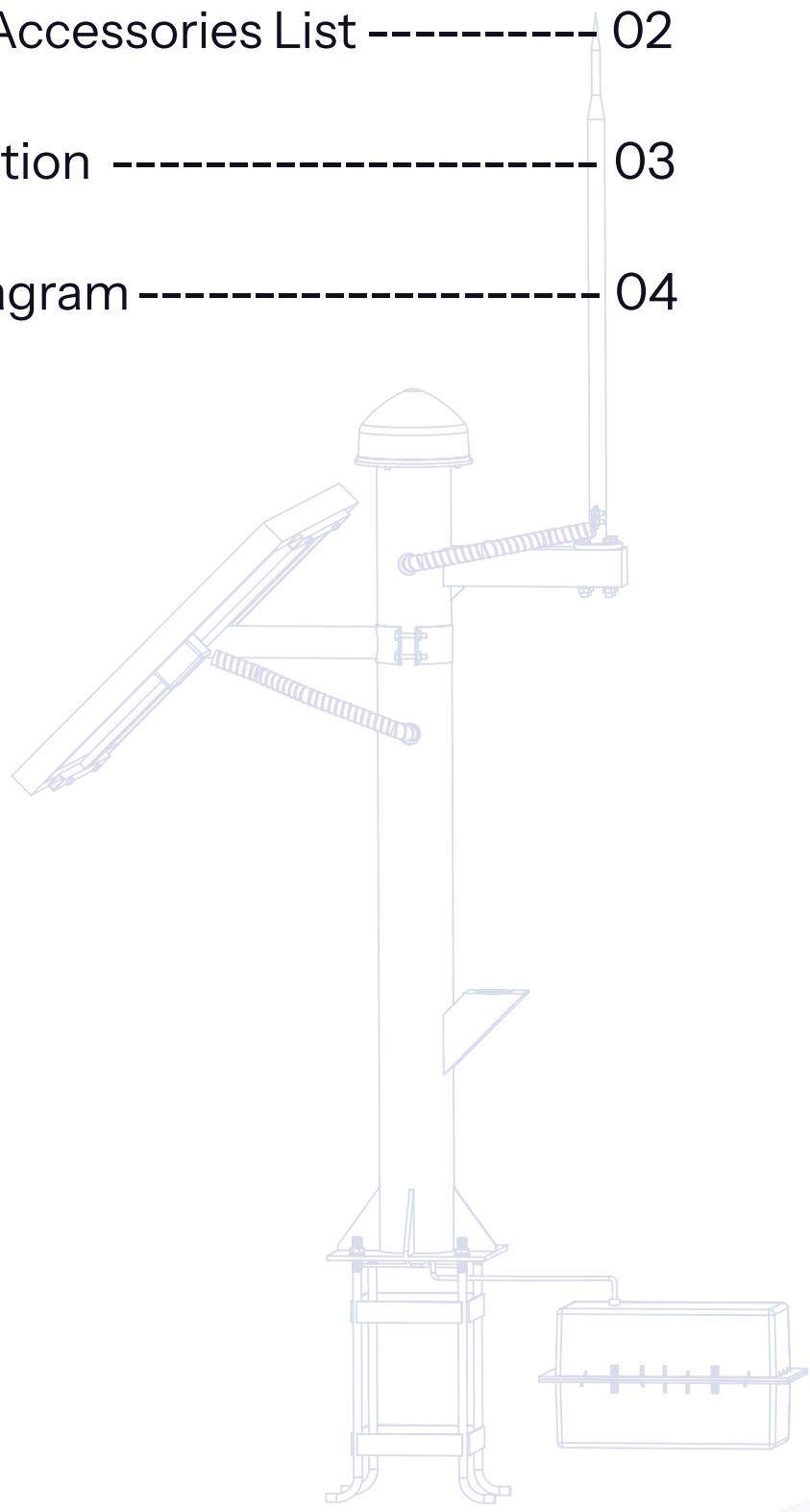
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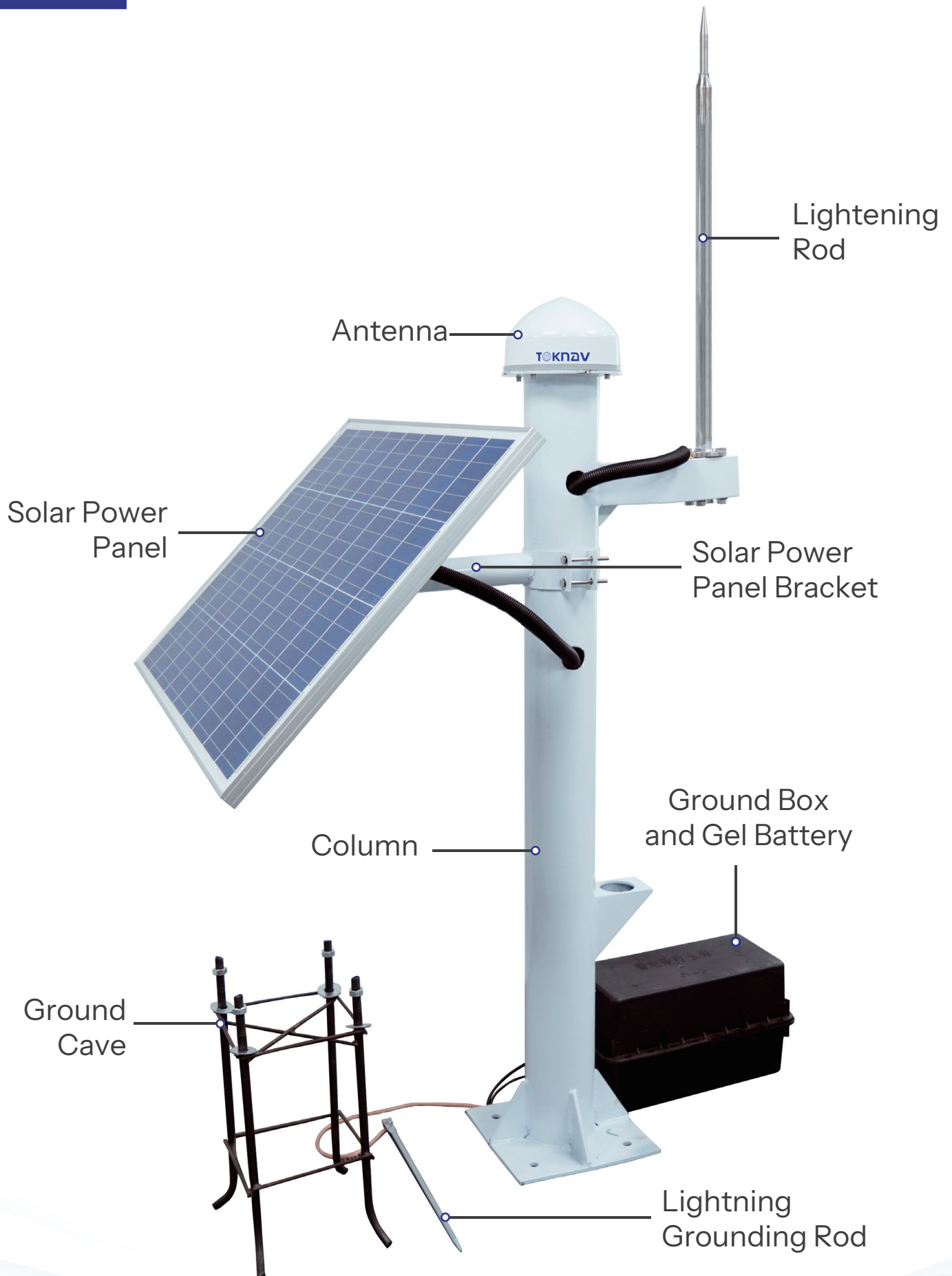
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I. Overall Assembly Diagram



II. Column Assembly Accessories List

No.	Name	Specification	QTY	Picture
1	UPS Lightning Rod	Stainless Steel, 1m, D32, H1000	1	
2	Outer Hexagon Nut	SS304 (without surface treatment) M12	4	
	Outer Hexagon Bolt	SS304 (without surface treatment) M12X100	4	
3	UPS Vertical Pole	Galvanized, White, 1.5m	1	
4	Ground Wire of Lighting Rod	5m, 16mm ²	1	
5	UPS Ground Pin	0.5m, Galvanized	1	
6	Gel Battery	100Ah, with Screws(M8X20)	1	
	Underground Box for Gel Battery	Black, Dimension Inside (415*195*260)	1	
7	1.5mm ² 2PIN PVC Cable (Power Cable for Gel Battery)	Black Outer Sleeve, Red and Black Core Wire, 3m	1	
8	Ground Cage	Steel, with M16 Nut and Gasket	1	
9	Corrugated Pipe	D25, PP Black, Splitted, 1m	2	
10	Solar Panel Bracket	Galvanised, White, Bolts and Nuts are Included (4*M8X90)	1	
11	Solar Panel	100W, Screws Included (4*M5X20)	1	
12	Solar Controller	RD1224-H10	1	
13	U6	With Data/Power Cable	1	

III. Tool List for Installation

Tool List for Installation		
Specification	Corresponding Screws and Screwdriver	Picture
Phillips #1 Screwdriver	Self-tapping screws	
0 - 25mm Adjustable Wrench	Antenna connector, Lightning rod hex screws	
5mm Hex Wrench	M6 hex screws	

IV. Pole Installation Diagram

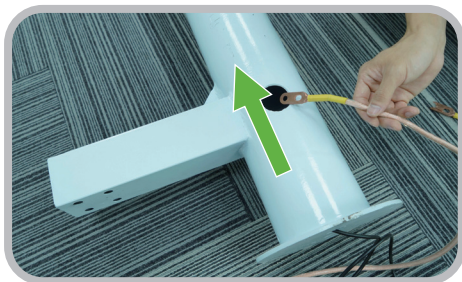
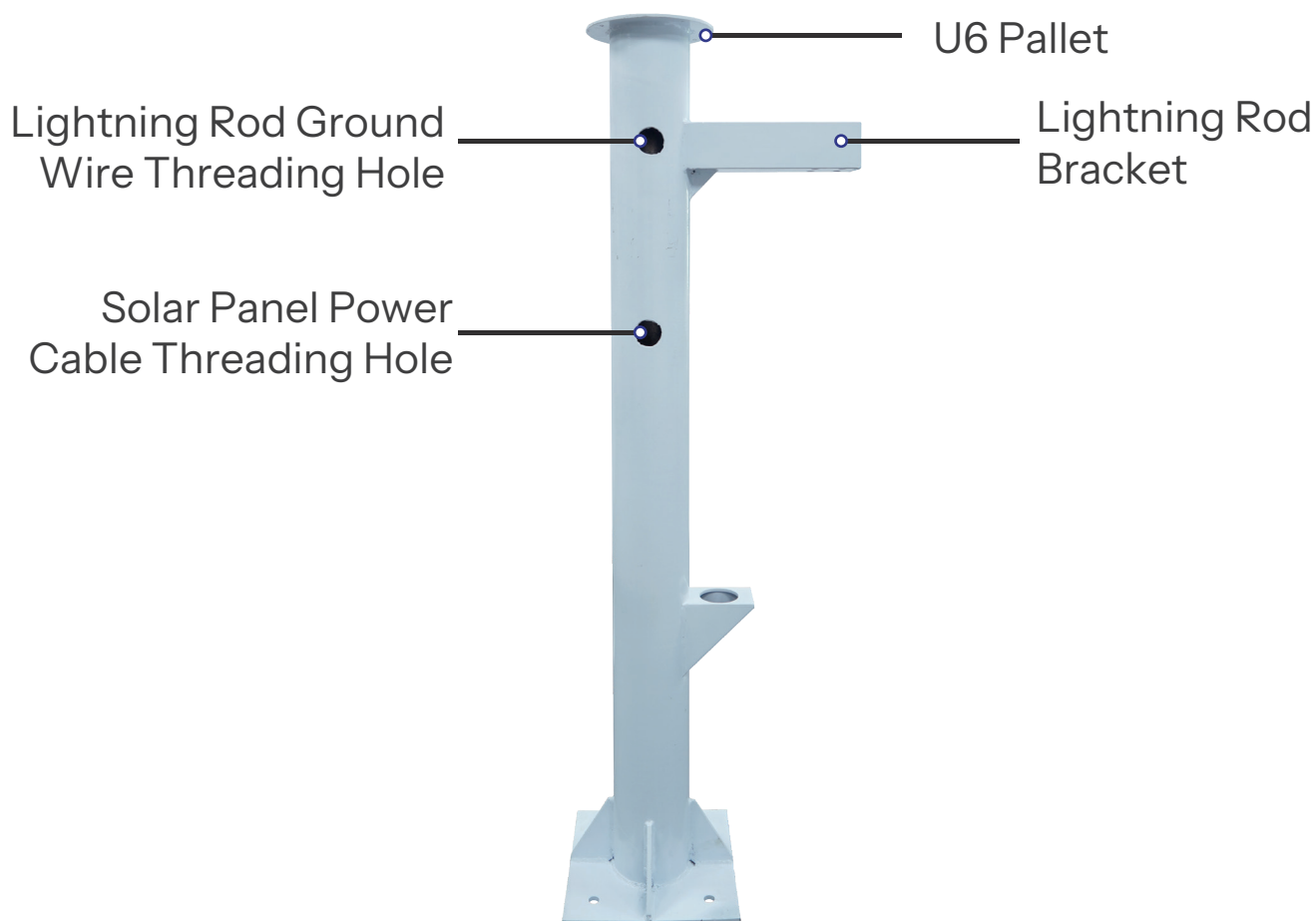


Figure 1-1

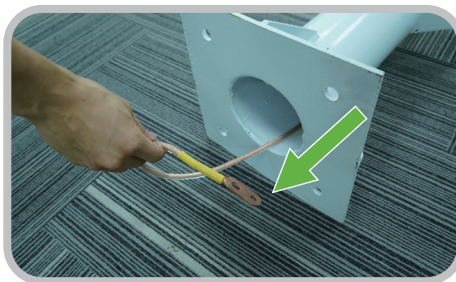


Figure1-2

① Lightning Rod Wire

As shown in Figure 1-1, thread the lightning rod ground wire through the grounding hole in the lightning rod and downward (it will be easier if the pole is upright), as shown in Figure 1-2. Then, pull the wire out from the bottom of the pole.

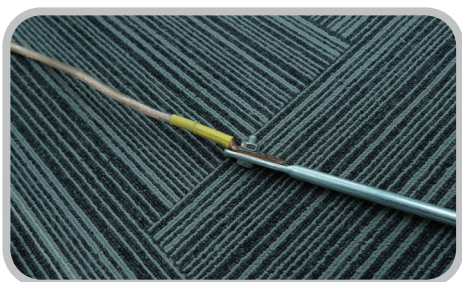


Figure 2

② Ground Plug Connection

As shown in Figure 2, fix the lightning rod ground wire to the ground plug using the screws that come with the ground plug.

IV. Pole Installation Diagram



Figure 3-1

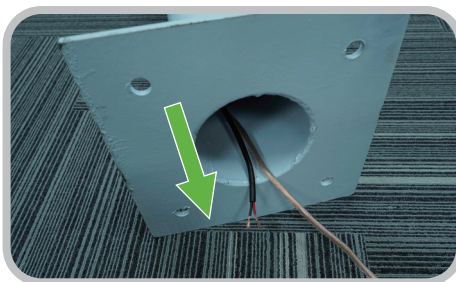


Figure 3-2

③ Solar Panel Power Cable

As shown in Figure 3-1, thread the solar panel power cable through the cable hole downward, and pull it out from the pole as shown in Figure 3-2.

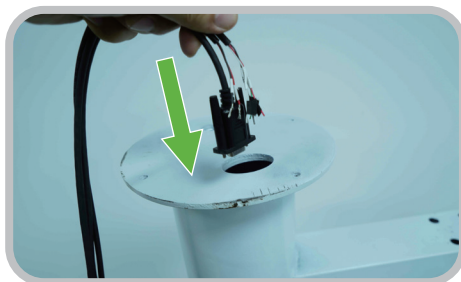


Figure 4-1

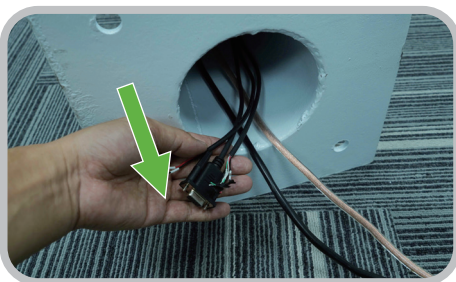


Figure 4-2

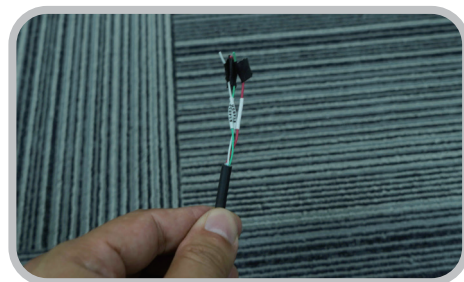


Figure 4-3

④ U6 Data Cable Installation

As shown in Figure 4-1, thread the DB9 connector and the loose end of the U6 data cable through the large circular hole in the pole tray, downward, and pull it out from the bottom of the pole as shown in Figure 4-2. For cables not in use, wrap the exposed ends with waterproof insulating tape to prevent exposure, as shown in Figure 4-3.

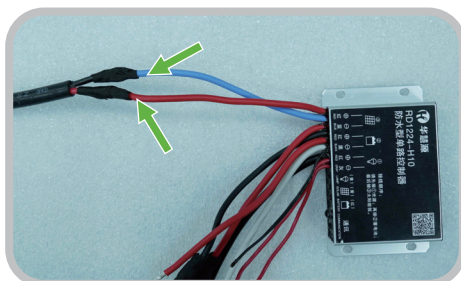


Figure 5-1

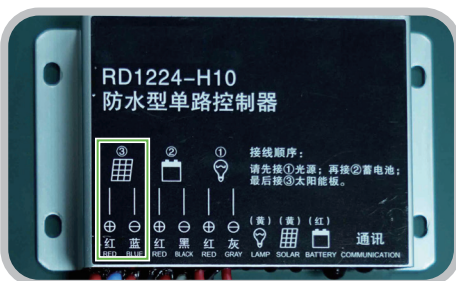


Figure 5-2

⑤ Solar Controller Solar Panel Connection

As shown in Figure 5-1, connect the solar panel power cable to the solar panel terminal of the controller: Red (+) to red (+), Black (-) to blue (-), then cover the connection with waterproof insulating tape. Figure 5-2 is an enlarged view of the controller.

IV. Pole Installation Diagram

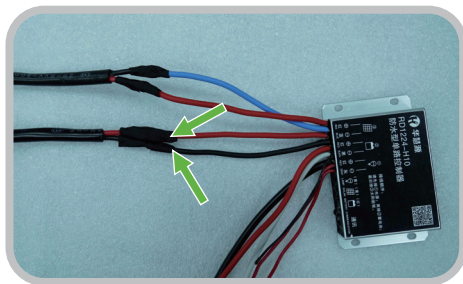


Figure 6-1



Figure 6-2

⑥ Solar Controller Battery Terminal Connection

As shown in Figure 6-1, connect the gel battery power cable to the solar battery terminal of the controller: Red (+) to red (+), Black (-) to black (-), then cover the connection with waterproof insulating tape. Figure 6-2 is an enlarged view of the controller.

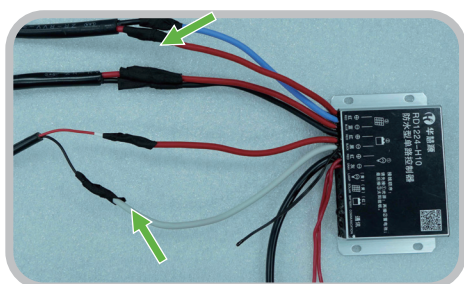


Figure 7-1



Figure 7-2

⑦ Solar Controller Power Terminal Connection

As shown in Figure 7-1, connect the power line of the U6 data cable to the power terminal of the controller: Red (+) to red (+), Black (-) to gray (-), then cover the connection with waterproof insulating tape. Figure 7-2 is an enlarged view of the controller.

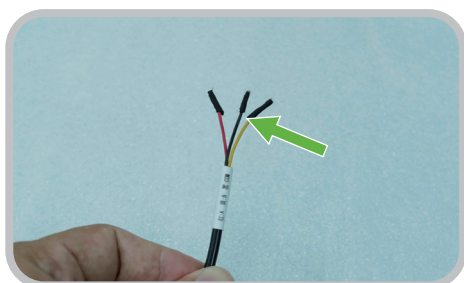


Figure 8-1

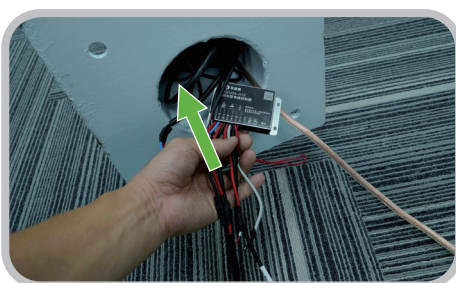


Figure 8-2

⑧ Placing the Solar Controller

As shown in Figure 8-1, wrap any unused cables of the solar controller with waterproof insulating tape to prevent exposed ends. Then, as shown in Figure 8-2, insert the controller into the pole.

IV. Pole Installation Diagram



Figure 9-1



Figure 9-2

⑨ Connecting the U6 with Cable

As shown in Figure 9-1, insert the 12-pin plug (red heart to red heart) into the U6 main unit socket. Then, align the cable holes and lay the main unit flat, as shown in Figure 9-2.



Figure10-1

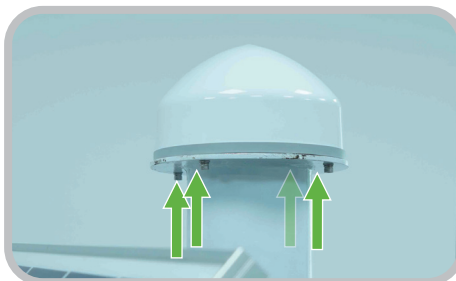


Figure10-2

⑩ Fixing the U6

As shown in Figure 10-1, use a 5mm hex wrench to tighten the four screws provided with the main unit to secure it. Once installed, it should look like Figure 10-2.



Figure 11

⑪ Installing the Lightning Rod

As shown in Figure 11, use four M12 screws to fix the lightning rod to the pole bracket



Figure 12

⑫ Fixing the Soft Copper Wire

As shown in Figure 12, use the two screws provided with the lightning rod to lock the copper terminals of the soft copper wire onto the lightning rod terminal. Then, cover the soft copper wire with corrugated tubing.

IV. Pole Installation Diagram

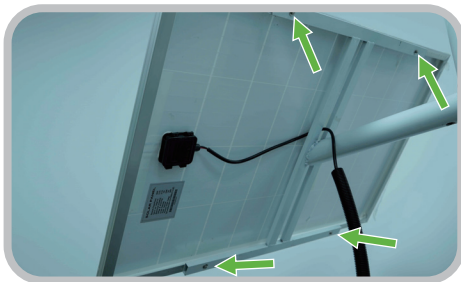


Figure 13

⑬ Fixing the Solar Panel to the Bracket

As shown in Figure 13, use the four M5X20 screws provided with the solar panel to fix it to the bracket.

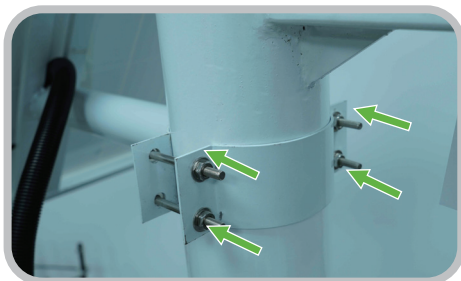


Figure 14

⑭ Fixing the Solar Panel Bracket

As shown in Figure 14, use the four M8x90 screws provided with the solar panel bracket to fix it to the pole.



Figure 15

⑮ Solar Panel Power Cable into the Corrugated Tube

As shown in Figure 15, place the exposed solar panel power cable into the corrugated tubing and insert it into the pole.

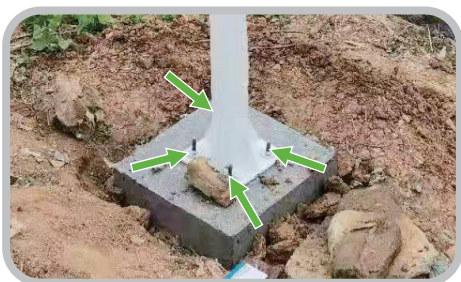


Figure 16

⑯ Fixing the Pole

Stand the pole upright and align it with the ground bolts. Secure the pole with nuts, as shown in Figure 16.
(The cable holes in the pole should be sealed with foam to prevent foreign objects from entering.)

IV. Pole Installation Diagram

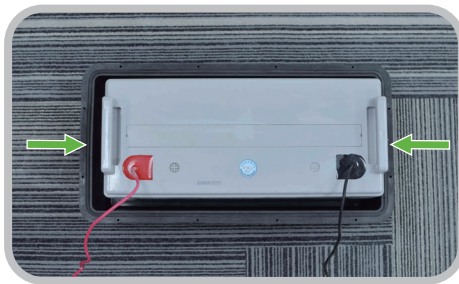


Figure 17-1

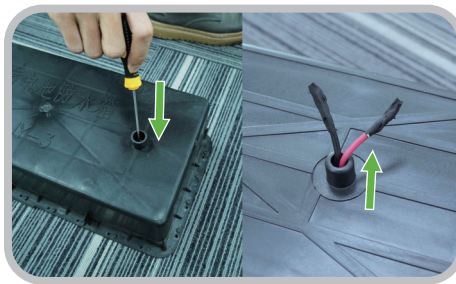


Figure 17-2

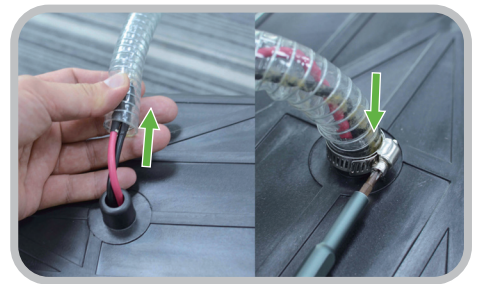


Figure 17-3

⑰ Wiring for the Gel Battery

As shown in Figure 17-1, place the gel battery inside the pre-buried box lid. In Figure 17-2, use a screwdriver to pierce the reserved cable hole on the lid. After sealing the battery power cable connections with electrical tape, thread the cable through the hole in the lid. In Figure 17-3, the gel battery power cable is threaded through the flexible hose provided with the pre-buried box. Then, insert one end of the hose into the hole and secure it with a steel clamp.



Figure 18-1

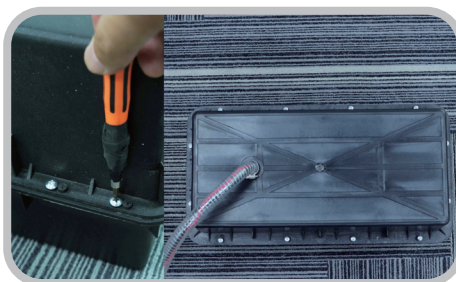


Figure 18-2

⑱ Burying the Gel Battery

As shown in Figure 18-1, connect the gel battery power cable to the pole power cable: Red (+) to red (+), Black (-) to black (-). (Seal the hose outlet with foam to prevent foreign objects and water from entering.)

In Figure 18-2, cover the box with the lid, and use the 12 self-tapping screws provided with the pre-buried box to secure the lid. Finally, bury the box in the pre-dug pit.